

# CARBURETOR SERVICE PROCEDURE

## HOLLEY 1-BARREL MODELS 1945, 1946, 1946-C & 6145

FORM NO.  
16H-17-801

**NOTE** — Some models of the Holley 1945, 1946, 1946-C and 6145 carburetors may vary in general design and appearance, but basic cleaning and adjustment procedures will remain the same.

### 1. DISASSEMBLY

Using the exploded view as a guide, disassemble carburetor only far enough to permit a thorough cleaning. Pay particular attention to the following:

- Pump rod retaining screw and retainer must be removed to allow pump shaft to be disconnected from pump rod.
- To remove power piston on 1945 models, press piston down and release, allowing it to pop up. Repeat until retaining washer is dislodged.

**NOTE** — Power piston should not be removed from 1946 series carburetors.

**CAUTION** — Main well emulsion tube is pressed into fuel bowl cover and care should be taken so it is not bent or damaged while carburetor is disassembled.

- If positive throttle return spring and pump rocker arm are being removed, release spring tension before removing retaining nut and lock washer.
- Removal of choke or throttle valve is not necessary unless part is bent, seized or damaged, requiring repair or replacement. If removal is necessary, file staked (peened) ends of valve retaining screws prior to turning.

**NOTE** — On 1979 and earlier models, do not remove idle mixture limiter cap unless recalibration is determined necessary after reassembly. If limiter cap is removed, the carburetor must be recalibrated with required equipment to meet state and federal exhaust emission regulations. When limiter cap is removed, count the number of turns required to seat idle mixture screw. This will serve as a starting point during reassembly.

**NOTE** — On 1980 and later models, the idle mixture screw is located behind a hardened steel plug in the throttle body. DO NOT remove plug and idle mixture screw unless it is absolutely necessary to replace mixture screw or normal cleaning and air pressure will not clean idle mixture passage. If it is necessary to remove mixture screw, the carburetor must be recalibrated with the required equipment to meet state and federal exhaust emission regulations. If idle mixture screw is removed, count the number of turns required to seat mixture screw. This will serve as a starting point during reassembly. If it is absolutely necessary to remove mixture screw, proceed as follows:

- With carburetor removed from vehicle, drill a  $\frac{3}{32}$ " hole in mixture needle plug approximately  $\frac{1}{4}$ " deep. Tap screw extractor tool into hole and twist plug out counterclockwise.

### 2. CLEANING

- Using a regular carburetor cleaning solution, soak parts long enough to thoroughly clean all surfaces and passages of foreign matter.
- Do not soak any parts containing rubber, leather or plastic, other than idle limiter cap.

- To remove any residue after use of cleaner, rinse parts in a suitable solvent.
- Blow out all passages with dry compressed air.

### 3. REASSEMBLY

Reassemble carburetor in reverse order of disassembly, paying particular attention to the following:

- Lubricate pump rod grommet before installing on pump rod.
- Install pump spring with small end facing pump cup.
- After installing power piston and spring, lightly stake retainer in position.
- Place pump link in specified slot of operating arm when installing bowl cover on carburetor.

### 4. ADJUSTMENTS

#### A. Float Level

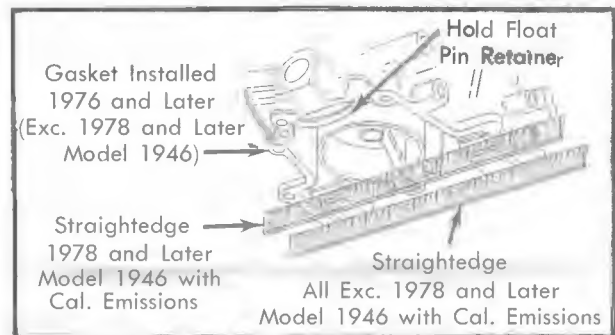
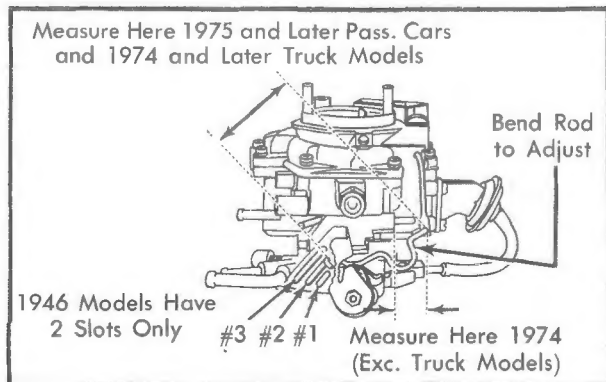


Fig. 1 Float Level Adjustment

1. Invert fuel bowl while holding float pin retainer in place.
2. Place a straightedge across top of fuel bowl at toe of float. See Fig. 1.
  - On 1974 models, toes of float should just touch straightedge. Float should not drop more than  $\frac{1}{32}$ " when straightedge is removed.
  - On 1975 models, measure distance between straightedge and toes of float.
  - On 1976 and later models with 1945 carburetors, float level is checked with gasket installed. Toes of float should just touch straightedge.
  - On 1978 and later Ford models with 1946 carburetor equipped with Federal emissions, float level is checked without gasket installed. Toes of float should just touch straightedge.
  - On 1978 and later Ford models with 1946 carburetor equipped with California emissions, float level is checked without gasket installed. Straightedge should just contact heel of float at step.
3. To adjust, bend float tang. Do not force needle against seat when adjusting.

## B. Accelerator Pump



**Fig. 2 Accelerator Pump Adjustment**

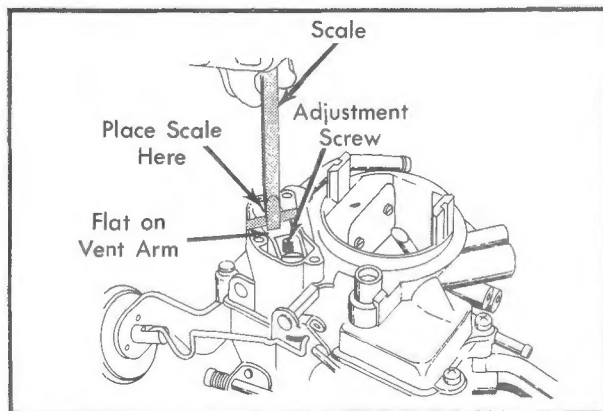
1974 (EXC. TRUCK MODELS)

1. Place pump link in specified slot of pump operating arm.
2. With throttle in curb idle position, measure distance between casting at vacuum passage and center of hole in pump rod. See Fig. 2.
3. To adjust, bend pump link at "U" shaped bend.

1975 AND LATER (1974 AND LATER TRUCK MODELS)

1. Place pump link in specified slot of pump operating arm.
2. Measure length of pump link. See Fig. 2.
3. To adjust, bend pump link at "U" shaped bend.

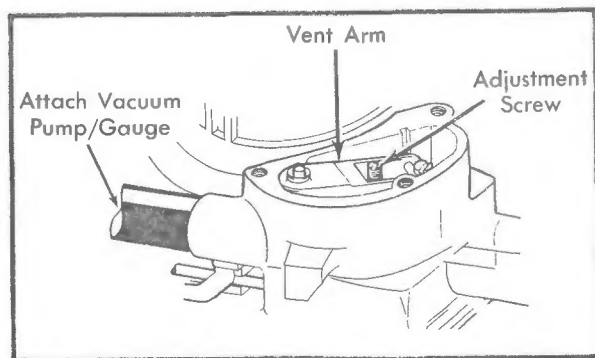
## C. Bowl Vent Valve (If Equipped)



**Fig. 3 Bowl Vent Valve Adjustment  
(Model 1945 Chrysler Corp.)**

MODEL 1945 (CHRYSLER CORP.)

1. Place throttle at curb idle position (choke fully open). Remove bowl vent cover and spring.
2. Measure distance from cover support surface down to flat on plastic vent arm. See Fig. 3.
3. To adjust, turn arm adjusting screw until specified measurement is obtained.
4. Install bowl vent spring and cover.

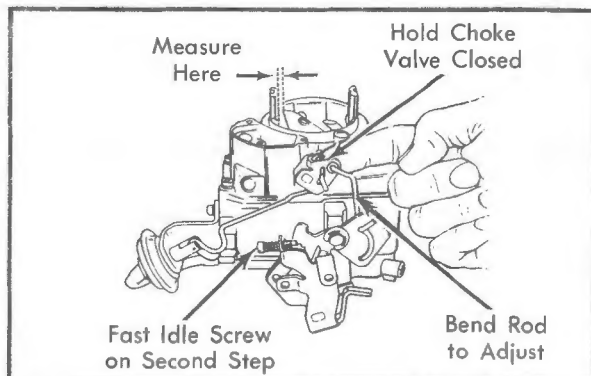


**Fig. 4 Bowl Vent Valve Adjustment  
(Model 1946 Ford Motor Co.)**

MODEL 1946 (FORD MOTOR CO.)

1. Attach a vacuum pump/gauge unit to bowl vent tube on carburetor. See Fig. 4.
2. Turn vent arm adjustment screw clockwise until less than  $\frac{1}{8}$ " of the screw protrudes through top of arm.
3. Apply vacuum to vent tube. Now slowly turn adjustment screw counterclockwise until vacuum registers on gauge.
4. When vacuum registers on gauge, bowl vent valve is seated. Release vacuum. Now turn screw an additional  $\frac{1}{2}$  turn clockwise.

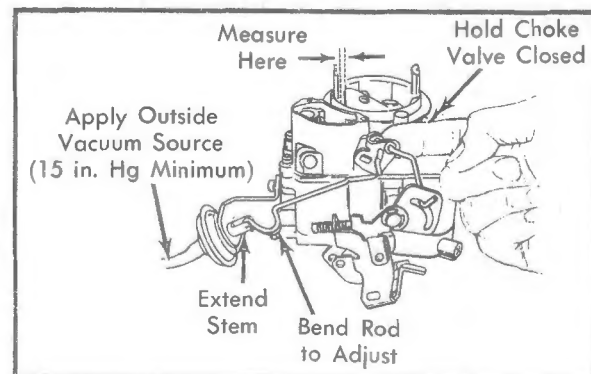
## D. Fast Idle Cam



**Fig. 5 Fast Idle Cam Adjustment**

1. Place fast idle screw on second step of fast idle cam against highest step and apply light closing pressure on choke lever.
2. Measure fast idle cam specified clearance between upper edge of choke valve and air horn wall. See Fig. 5.
3. To adjust, bend fast idle cam rod.

## E. Choke Vacuum Kick



**Fig. 6 Choke Vacuum Kick Adjustment**

1. Place fast idle speed screw on highest step of fast idle cam.
2. Seat vacuum diaphragm by applying an outside vacuum source of at least 15 in. Hg.
3. With throttle held partially open, apply light closing pressure at choke lever. Enough force should be used to extend outer stem of vacuum diaphragm (bucking spring compressed).
4. Measure choke vacuum kick specified clearance between upper edge of choke valve and air horn wall. See Fig. 6.
5. To adjust, bend rod at "U" shaped bend.

#### F. Choke Unloader

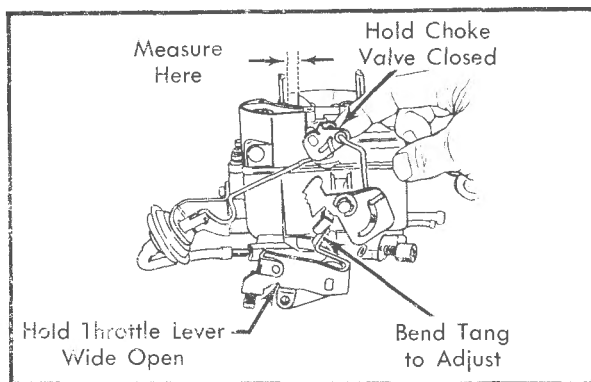


Fig. 7 Choke Unloader Adjustment

1. Hold throttle lever in wide open position while applying a slight closing pressure to choke lever.
2. Measure choke unloader specified clearance between upper edge of choke valve and air horn wall. See Fig. 7.
3. To adjust, bend tang on throttle lever.

#### G. Curb Idle Speed

**NOTE** — If idle limiter cap has been removed, refer to Manufacturer's Service Manual for correct idle mixture setting procedure and specifications (air/fuel ratio).

1. Warm engine to normal operating temperature, choke fully open.
2. With idle stop solenoid energized (if equipped) and air cleaner installed, set idle RPM as shown on engine compartment Emission Control Tune-Up Decal by turning curb idle adjusting screw.
3. Adjust idle mixture screw to obtain smoothest idle within range of limiter cap (if adjustable).

Readjust curb idle speed screw as necessary.

#### H. Fast Idle

MODEL 1945 (CHRYSLER CORP.)

1. For heater operation. Disconnect and plug vacuum hoses from carburetor to heater air control and OSAC valve.

2. If not equipped with an OSAC valve, disconnect and plug vacuum hose from carburetor to distributor vacuum advance.
3. Disconnect EGR hose (if equipped).
4. Open throttle and close choke. Now close throttle and position fast idle speed screw on highest step of fast idle cam.
5. Rotate fast idle cam until fast idle speed screw drops to second step.
6. With engine at normal operating temperature, adjust fast idle speed screw to obtain fast idle RPM as shown on engine compartment Emission Control Tune-Up decal.

MODEL 1946 (FORD MOTOR CO.)

**NOTE** — Air cleaner must remain installed and all hoses (with the following exceptions) attached.

1. Disconnect purge valve hose at first connection from purge valve.
2. Disconnect canister hose at air cleaner and plug air cleaner. Disconnect and plug PCV hose at air cleaner.
3. Remove spark delay valve (if equipped) and route distributor vacuum advance hose directly to carburetor.
4. Change Thermactor (Air Injection Reactor) hoses as follows:
  - For dump valves with 1 or 2 vacuum lines on the side, disconnect and plug line(s).
  - For dump valves with 1 vacuum line on top, trace line to see that it is connected to intake manifold. If not, remove and plug line at dump valve, then, connect a slave line from dump valve to intake manifold.
5. If equipped with a ported vacuum switch or a cold weather modulator in line from EGR valve to carburetor, disconnect and plug line at carburetor.
6. With engine at normal operating temperature, place fast idle speed screw on specified cam step. Adjust RPM as shown on engine compartment Emission Control Tune-Up Decal by adjusting fast idle adjusting screw.

#### I. Dashpot (Model 1945 Man. Trans.)

1. Hold throttle open to allow engine speed to stabilize at 2300 RPM (1974-76 models) or 2500 RPM (1977 and later).
2. Dashpot stem should just touch throttle lever.
3. To adjust, loosen lock nut, turn dashpot and retighten lock nut.

#### J. Automatic Choke (Model 1946)

1. Loosen choke cover retaining screws. Turn choke cover until marks are aligned (Index setting).
2. Tighten choke cover screws.

NOT USED  
ON FORD  
MODEL 1946-C

FORD MODEL  
1946-C ONLY

FORD MODELS  
1946 & 1946-C  
ONLY

Ref.  
No.                      Nomenclature

1. — Fuel Bowl Cover
2. — Bowl Vent Solenoid<sup>①</sup>
3. — Fuel Bowl Cover Screw (7)
4. — Air Cleaner Bracket
5. — Bowl Vent Cover Screw (3)<sup>②</sup>
6. — Bowl Vent Cover<sup>③</sup>
7. — Bowl Vent Cover Gasket<sup>②</sup>
8. — Vent Valve Spring<sup>③</sup>
9. — Vent Valve Hinge Screw<sup>①</sup>
10. — Vent Valve Hinge Pin<sup>②</sup>
11. — Vent Valve Arm<sup>③</sup>
12. — Vent Valve Adj. Screw<sup>②</sup>
13. — Vent Valve<sup>②</sup>
14. — Choke Coil Cover Gasket
15. — Choke Coil Cover
16. — Choke Coil Cover Retainer
17. — Choke Coil Cover Retainer Screw
18. — Accel. Pump Rod
19. — Accel. Pump Rod Grommet
20. — Accel. Pump Rod Retainer
21. — Accel. Pump Rod Retainer Screw
22. — Fast Idle Cam Link
23. — Accel. Pump Spring Retainer
24. — Accel. Pump Spring Retainer Screw
25. — Accel. Pump Piston Stem
26. — Accel. Pump Spring
27. — Accel. Pump Piston Cup
28. — Fuel Bowl Cover Gasket
29. — Float Pin Retainer
30. — Fast Idle Cam
31. — Fast Idle Cam Retainer
32. — Power Valve Seat
33. — Power Valve Needle & Spring
34. — Main Jet
35. — Accel. Pump Weight
36. — Accel. Pump Check Ball
37. — Float Assembly
38. — Choke Pull-Off Assembly
39. — Choke Pull-Off Hose
40. — Fuel Filter
41. — Needle & Seat Assembly
42. — Needle & Seat Assembly Gasket
43. — Fuel Bowl Assembly
44. — Float Hinge Pin
45. — Hot Idle Compensator Gasket<sup>③</sup>
46. — Hot Idle Compensator<sup>③</sup>
47. — Hot Idle Compensator Cover Gasket<sup>③</sup>
48. — Hot Idle Compensator Cover<sup>③</sup>
49. — Cover Screw (2)<sup>③</sup>
50. — Idle Mixture Screw Limiter Cap
51. — Idle Mixture Screw
52. — Idle Mixture Screw Spring
53. — Throttle Body Gasket
54. — Throttle Body Assembly
55. — Throttle Body Screw (3)
56. — Accel. Pump Actuating Link
57. — Anti-Diesel Solenoid & Screw (If Equipped)

- ① — Used on Ford 1946-C Model Carburetors Only.
- ② — Not Used on Ford 1946-C Model Carburetors.
- ③ — Used on Ford 1946 & 1946-C Model Carburetors Only.

Exploded View of Typical Holley Models 1945, 1946, 1946-C and 6145 1-Barrel Carburetor

# SPECIFICATION & ADJUSTMENT

**NOTE:** See Engine Compartment Decal or manufacturer's service manual for Idle Mixture and Speed Specifications

Adjustment Reference Letter			A	B		C	D	E	F
Application			Float Level	Pump Slot	Pump Measure	Bowl Vent	Fast Idle Cam	Vacuum Kick	Choke Unloader
<b>CHRYSLER CORP.</b> (Model 1945 & 6145)									
1974	198"	A/T	1	3	13/16"	.....	.080"	.090"	.250"
		M/T	1	2	11/16"	.....	.080"	.140"	.250"
	225"	A/T	1	3	3/4"	.....	.080"	.080" <sup>2</sup>	.250"
		M/T	1	2	11/16"	.....	.080"	.140"	.250"
1975	225"	A/T	3/64"	3	2-21/64"	.....	.080"	.090"	.250"
		M/T	3/64"	2	2-7/32"	.....	.080"	.130"	.250"
1976	225"	A/T	1	3	2-21/64"	1/16"	.080"	.100"	.250"
		M/T	1	2	2-21/64"	1/16"	.080"	.110"	.250"
1977	225"	A/T	1	3	2-21/64"	1/16"	.080"	.100" <sup>3</sup>	.250"
		M/T	1	2	2-7/32"	1/16"	.080"	.110" <sup>4</sup>	.250"
1978	225"	A/T	1	3	2-21/64"	1/16"	.080"	.110" <sup>5</sup>	.250"
		M/T	1	2	2-7/32"	1/16"	.080"	.110"	.250"
1979	225"	A/T	1	2	1-39/64" <sup>13</sup>	1/16"	.080"	.110" <sup>14</sup>	.250"
		M/T	1	1	1-45/64"	1/16"	.080"	.110"	.250"
1980	225"	A/T	1	2	1-39/64"	1/16"	.090"	.150"	.250"
		M/T	1	1 <sup>16</sup>	1-45/64"	1/16"	.090"	.140" <sup>17</sup>	.250"
<b>DODGE &amp; PLYMOUTH TRUCK</b> (Model 1945)									
1974	225"	A/T	1	3	2-11/32"	.....	.080"	.090"	.250"
		M/T	1	2	2-11/32"	.....	.080"	.140"	.250"
1975	225"	A/T	3/64"	3	2-21/64"	.....	.080"	.090"	.250"
		M/T	3/64"	2	2-7/32"	.....	.080"	.110" <sup>6</sup>	.250"
1976	225"	A/T	1	3	2-21/64"	.....	.080"	.090" <sup>7</sup>	.250"
		M/T	1	2	2-7/32"	.....	.080"	.110"	.250"
1977-79	225"	A/T	1	3	2-21/64"	.....	.080"	.110"	.250"
		M/T	1	2 <sup>8</sup>	2-7/32" <sup>9</sup>	.....	.080"	.110"	.250"
1980	225"	A/T	1	2	1-39/64"	1/16"	.090"	.130"	.250"
		M/T	1	1	1-45/64"	1/16"	.080"	.130"	.250"
<b>FORD MOTOR CO.</b> (Model 1946 & 1946-C)									
1978	200"	A/T	1	2	2-5/32"	10	.090" <sup>11</sup>	.110" <sup>12</sup>	.150"
1979	200"	Fed.	1	2	2-1/4" <sup>15</sup>	10	.130"	.150"	.150"
		Cal.	1	2	2-5/16"	10	.130"	.150"	.150"
1980	200"	Fed.	1	2	.....	.....	.080" <sup>18</sup>	.100" <sup>19</sup>	.150"
		Cal.	1	.....	.....	.....	.090"	.115"	.150"

ABBREVIATIONS: A/T = Automatic Transmission; M/T = Manual Transmission; Cal. = California Emissions; Can. = Canada; Fed. = Federal Emissions.

- 1 - Float to touch straight edge. See adjustment.
- 2 - R-6726A (Cal.) = .090"
- 3 - R-7744A (Cal.) = .130"
- 4 - R-7745A (Cal.) = .150"
- 5 - R-8010A (Cal.) = .130"
- 6 - R-7209A (Can.) = .130"
- 7 - R-7429A = .110"

- 8 - R-7815A (Cal.) = Slot 3
- 9 - R-7815A = 2-21/64"
- 10 - See adjustment procedure.
- 11 - D8BE-UC (Cal.) = .130"
- 12 - D8BE-UC (Cal.) = .150"
- 13 - R-8286A (Cal.) = 1-3/4"
- 14 - R-8286A (Cal.) = .150";  
R-8680A (Cal.) = .130"

- 15 - D9BE-LA = 2-13/64"
- 16 - R-8831A = 2
- 17 - R-8719A = .150"
- 18 - E0BE-ALA, AMA = .070";  
E0ZE-BBA = .086"
- 19 - E0BE-ALA, AMA = .100";  
E0ZE-BBA = .120"